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Japan's maglev project derailed by pandemic and environmental fears

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Had Japan gone ahead with the Tokyo Games this summer, the Central Japan Railway Co. would have watched with pride as visitors from all across the globe enjoyed test rides on its magnetically levitated high-speed train, or maglev, which it touts as the world's fastest.

In this alternate universe without the coronavirus pandemic, it would have been the glorious year of 1964 all over again, when the company's trademark Tokaido Shinkansen line linking Tokyo and Osaka debuted just nine days before the Tokyo Olympics as a symbol of Japan's resurrection from the ashes of World War II — boasting what was then, again, the world's fastest train service.

“Getting foreign visitors to try out the maglev at our testing site in Yamanashi Prefecture was our plan, but with the Olympics this year delayed, it has fizzled out,” Shin Kaneko, president of the company, also known as JR Central, said during a sit-down with Shizuoka Gov. Heita Kawakatsu in June.

It is the Shizuoka governor who now poses what is perhaps the greatest threat to the whopping ¥9 trillion maglev project, which JR Central has staked its future on and the administration of Prime Minister Shinzo Abe has enthusiastically supported.

Kawakatsu has expressed environmental concerns and is worried that the excavation work will reduce water flow to a major river in Shizuoka that provides water to many towns in the prefecture. The view prevails that the governor's continued refusal to greenlight tunnel construction in his prefecture has all but dashed hopes of a 2027 opening of the maglev line between Tokyo and Nagoya, as well as the 2037 debut of the extension between Tokyo and Osaka.

In addition to the local problems, the project is facing the COVID-19 pandemic, which has steered an increasing number of businesspeople — the primary clientele for high-speed trains — toward online meetings. Their growing abandonment of conventional long-distance business trips is prompting some to question the value of the ultrafast travel the maglev has to offer.

Here is a look into the complicated state of affairs surrounding the maglev project — how it started, where it is now and where it is headed.

What's the maglev project?

The maglev shinkansen project has been around for decades, having first gotten the nod from the transport minister in 1973. The project gained momentum with the 1977 establishment of now-defunct testing tracks in Miyazaki Prefecture, which was later replaced by a new testing site in Yamanashi Prefecture that began construction in 1990 and officially debuted in 1997. Dubbed the “dream” shinkansen, the maglev initiative rode high on a wave of optimism during the nation’s so-called bubble economy in the 1980s — a boom that fizzled out once Japan slipped into what would become decades of economic malaise.

The maglev was catapulted back into the spotlight in 2007 when JR Central made a surprise announcement that it will take over and fund the project on its own, an ambitious undertaking given the construction of a shinkansen line had never been spearheaded by a private company.

The maglev train, which is also known as the Chuo Shinkansen, runs at a speed of 500 kilometers per hour and is powered by electromagnetic technology that lifts the train’s cars about 10 centimeters above the tracks as it travels.

The unprecedented velocity of this floating train is expected to slash a trip between Tokyo and Nagoya to 40 minutes from the current 90-**plus** minutes, and one between Tokyo and Osaka to just over an hour from the current 2½ hours.

It’s perhaps little wonder, then, that the maglev is a vehicle altogether different from conventional high-speed trains.

For one, it will be remotely controlled and have no driver. The bulk of its 440-km passageway between Tokyo and Osaka will be either underground or covered, meaning passengers will be denied scenic views for most of the journey. Shomei Yokouchi, a late former governor of Yamanashi, once famously likened the riding experience to going through a sewage pipe.

This emphasis on speed to the near exclusion of the pleasure of travel suggests the maglev is primarily geared toward businesspeople in need of the fastest ride possible, rather than, say, families or others going on vacation.

Aside from speed, JR Central also touts the role the maglev can play in firming up Japan’s disaster preparedness. More than 50 years after the Tokaido Shinkansen line’s debut, dilapidation is now said to be setting in.

This, coupled with lessons learned from the 2011 earthquake, tsunami and nuclear disaster in northern Japan that paralyzed nearby shinkansen operations for months, now heightens the need for an alternative avenue of transportation, the company says.

What are its economic prospects?

Mitsubishi UFJ Research and Consulting Co., for one, estimates the hypothetical opening of the Tokyo-Nagoya maglev line in 2025 would generate an economic impact worth ¥10.7 trillion over a 50-year period.

The debut of a Tokyo-Osaka line the same year, meanwhile, would raise the figure to ¥16.8 trillion.

JR Central also says the maglev, with its speed, will drastically enhance the connectivity of the 16 prefectures that constitute the company’s market, leading to the creation of a mega-economic zone.

The gross domestic product for this region, which includes not only the metropolitan trio of Tokyo, Osaka and Nagoya, but prefectures such as Kanagawa, Yamanashi, Nagano and Kyoto, amounts to ¥330 trillion, surpassing that of France.

Why is it important for Japan?

Although spearheaded by JR Central, the maglev is, as many put it, a “national project” in the sense that the Abe administration has gone to great lengths to support it.

It has, for one thing, provided the firm with ¥3 trillion in loans as part of infrastructure support that it pledged in a 2016 economic package. Galvanized by the financial support, JR Central moved up its deadline for the opening of the Tokyo-Osaka line by eight years to 2037 from the original 2045. The government also made the project exempt from levies, including a real estate acquisition tax, that otherwise would have cost ¥18 billion.

Behind the government’s push for the maglev initiative is its desire to establish a megalopolis that will give Japan a competitive edge over other countries that boast so-called mega-regions.

Those include “BosWash” on the east coast of the United States, a chain of cities that stretches from Boston to Washington D.C., and China’s Pearl River Delta, an industrial center that comprises nine cities in Guangdong province, plus the special administrative regions of Hong Kong and Macau.

The government hopes the maglev shinkansen will link as many as 19 prefectures, including those in the greater Tokyo area as well as the central and southern parts of Japan’s main island, into a megalopolis that it dubs a “super mega region.”

Even bigger than JR Central’s market, the envisioned economic area will be home to a population of about 82 million people, with an estimated GDP of \$3.2 trillion (about ¥340 trillion), compared with \$4.2 trillion (about ¥448 trillion) of BosWash, according to the transport ministry.

The maglev also dovetails with the government’s push for infrastructure exports, with Tokyo vying to spearhead the construction of a maglev system in the U.S. that would connect Washington, Baltimore and New York.

In 2014, Abe went out of his way to accompany Caroline Kennedy, then-American ambassador to Japan, on a maglev test ride at the Yamanashi site, directly touting Japan’s shinkansen technology as he did so.

What’s the latest status?

Prospects of the project launching according to schedule are now dire due to the holdup in Shizuoka Prefecture.

At the heart of delay is a 8.9-km portion of the tunnel to be hosted by the prefecture that would only account for 3 percent of the entire 290-km line between Tokyo and Nagoya. Short as it is, this section is said to require highly complicated excavation work that will take about 7½ years to complete and includes dealing with the fragile ecosystem and unpredictable geology of the mountainous region known as the Southern Alps.

In a much-anticipated showdown in June, Shizuoka’s Kawakatsu and JR Central’s Kaneko met one-on-one for the first time to discuss the impasse. But the negotiations went nowhere, with Kaneko trying in vain to convince Kawakatsu to greenlight the start of construction work in Shizuoka.

During the talk, which was broadcast live online, a desperate Kaneko repeatedly stressed time was running out. At the very least, he says, preliminary construction work in the lead-up to the actual tunnel excavation must commence in Shizuoka by the end of June to meet the 2027 deadline.

“If you’re still going to say ‘no,’ then that means the 2027 opening will be difficult, or impossible even,” Kaneko said. Despite the plea, Kawakatsu, citing environmental concerns, didn’t budge.

Nearly two months after the meeting, there is no sign yet of a breakthrough, with a delay in construction threatening to further inflate the ¥9 trillion outlay for the maglev project.

Governors in other prefectures along the passageway, including Aichi Gov. Hideaki Omura, have criticized Kawakatsu's perceived intransigence for threatening to derail the 2027 deadline, which he says must be met.

Why is Shizuoka opposed to the maglev construction?

Shizuoka insists it is not opposed to the maglev project per se. Kawakatsu, for example, says he understands the role it can play in improving disaster preparedness.

But, the fact remains that of all the seven prefectures the maglev passes through between Tokyo and Nagoya, Shizuoka is the only prefecture where no new station will be built for the train to stop at — meaning there is little benefit to the prefecture from the project in the first place.

On the surface, though, Kawakatsu has focused his criticisms primarily at the environmental impact the project will have.

His main concern is the assessment that construction of a tunnel through the Southern Alps would result in the nearby Oi River losing up to 2 tons of water per second.

Shizuoka Prefecture says the Oi River serves as a vital source of water that about 620,000 residents in the vicinity who rely on it for daily use. The river's historical proneness to drought, as well as the construction of dams nearby, has frequently caused water shortages in the area, with residents launching into a vociferous "Return Water" campaign in the 1980s.

"People in Shizuoka are known for their mild personality, but even they had to take action," Kawakatsu told Kaneko in the June showdown. "That's how careful you need to be in approaching this issue."

Although JR Central initially explained that steps will be taken to make sure any lost water will be channeled back to the Oi River, it later admitted that a loss of a certain amount cannot be avoided during construction. A reinvigorated Kawakatsu is now adamant that "not a single drop of water" be sacrificed.

How has the coronavirus affected the maglev prospects?

Adding to the stalemate between Shizuoka and JR Central is the coronavirus pandemic, which has endangered the maglev project's already questionable profitability.

In 2013, Yoshiomi Yamada, then-president of JR Central, admitted at a news conference that "there is no way" the maglev initiative will register a surplus on its own, and that the cost of building it is so huge that it can only barely be offset by revenues from the conventional Tokaido Shinkansen Line that it operates.

But COVID-19 has taken a toll on the firm's prosperous high-speed train business, slashing passenger traffic by about 90 percent in April and May from a year earlier.

Moreover, the pandemic has "made many businesspeople realize they can replace their traditional trips with teleconferences," Mitsuhiro Miyashita, chief consultant at Mitsubishi UFJ Research and Consulting Co., says. The normalization of online meetings, he says, suggests demand for conventional business trips via shinkansen won't fully recover even after the pandemic has subsided.

This new normal is threatening to question the *raison d'être* of the maglev shinkansen project itself, sparking skepticism among some toward the necessity of its 500-kph speed.

"We need to adapt to a new era," Kawakatsu told Kaneko.

"The internet is faster than the maglev train, you know."

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